**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Id: \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Determine the representation of ( 89)10 using the following code 6421 (1)

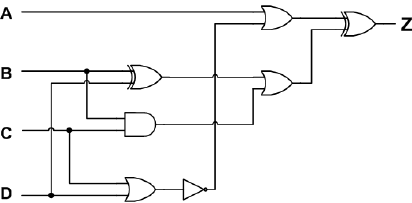
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1. Add the following two BCD numbers, (1001 0010 0011) + (0011 0111 1000) (3)

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1. Calculate the propagation delay of the following logic diagram (1)

Knowing the propagation delay of the following gates: NOT gate=3nsec AND gate & OR gate=10 nsec NAND gate & NOR gate=13 nsec XOR gate=20nsec XNOR gate=23 nsec



1. Draw the logic diagram for the following function after simplification using k-map,

F(W,X,Y,Z)= π(0,1,4,5,12,13)+d(6,7,14,15) as SoP (5)

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